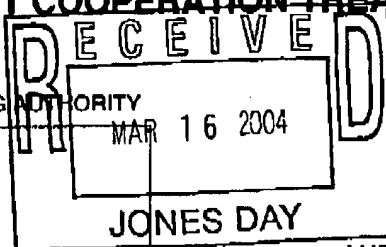


PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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To:

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ETATS-UNIS D'AMERIQUE

WRITTEN OPINION
(PCT Rule 66)

Date of mailing
(day/month/year)

11.03.2004

Applicant's or agent's file reference
8317-129-228

REPLY DUE

within 1 month(s)
from the above date of mailing

International application No.
PCT/US 02/3233

International filing date (day/month/year)
28.01.2002

Priority date (day/month/year)
28.01.2002

International Patent Classification (IPC) or both national classification and IPC
C11D3/02, C11D3/02

Applicant

EKC TECHNOLOGY, INC.

1. This written opinion is the **second** drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☒ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 28.05.2004

Name and mailing address of the international
preliminary examining authority:



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WRITTEN OPINIONInternational application No. **PCT/US 02/03233****I. Basis of the opinion**

1. With regard to the **elements** of the International application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-39 as originally filed

Claims, Numbers

1-78 as originally filed

Drawings, Sheets

1-9 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

WRITTEN OPINIONInternational application No. **PCT/US 02/03233****IV. Lack of unity of invention**

1. In response to the invitation (Form PCT/PEA/405) to restrict or pay additional fees, the applicant has:

- ☒ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with for the following reasons and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees:

3. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this opinion:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 24-61, 68-74, 75-78 (in part) .

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | |
|-------------------------------|--------|-------------------------------------|
| Novelty (N) | Claims | 42,43,48,51-54,56,61,75,76,78 |
| Inventive step (IS) | Claims | 24-41,44-47,49,50,55,57-60,68-74,77 |
| Industrial applicability (IA) | Claims | |

2. Citations and explanations

see separate sheet

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SEPARATE SHEET**

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Re Item V**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following documents :

- D1: WO-A-01/10961
- D2: US-A-5988342
- D3: WO-A-9502033
- D4: WPI Abstract 78-46701A & JP-A-53056203
- D5: WO-A-9015858
- D6: US-A-4105574
- D7: US-A-5534199
- D8: PAJ Abstract for JP-A-8337793
- ... D9: WO-A-0127986
- D10: US-A-5672577

2. Novelty (Article 33(2) PCT)

2.1 D1 discloses (cf. Example 1) an aerosol formulation containing triethanolamine, monoethanolamine and morpholine as amine components, benzyl alcohol, Solvesso 200, propylene glycol and deionised water as solvent components, and propoxylated sorbitan monooleate as a nonionic surfactant. These aerosol formulations preferably foam when sprayed onto a substrate (cf. page 7, lines 27-30) and therefore the foamed formulation will contain air as a gas.

The formulation also contains sodium nitrite as a corrosion inhibitor (cf. Example 1) and is used to remove paints, coatings, grease and othe residues from various substrates (cf. abstract).

2.2 D2 discloses (cf. Example 1) a foaming cleaning composition for cleaning medical and dental instruments containing triethanolamine as an amine component, propylene glycol and deionised water as solvent components and Fluorad FC-100 as a nonionic surfactant. The composition will contain air as a gas when present in foam form.

2.3 D3 discloses (cf. Example 3-1) a foaming oven cleaner in aerosol form containing monoethanolamine as an amine component, DGMDE and ethylene glycol diethyl ether

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SEPARATE SHEET**

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as solvent components and sodium N-lauroyl sarcosinate as an anionic surfactant. The composition will contain air as a gas when present in foam form.

2.4 D4 discloses an aerosol cleaning composition containing morpholine or an alkanolamine as an amine component, a glycol ether and a lower alcohol as solvent components and a nonionic surfactant. The composition forms a foam when applied to a surface and this foam will contain air as a gas.

2.5 D5 discloses (cf. Example 1; page 13, lines 12-25) a foaming oven cleaner containing triethanolamine as an amine component, d-limonene and dipropylene glycol methyl ether as solvent components, Neodol 91-2.5, Sole-Mulse B and Emsorb 2502 as nonionic and anionic surfactant components and a propellant as a gas component. The composition will contain air as a gas when in the foam form.

2.6 D6 discloses (cf. Example I; claim 1) a foaming oven cleaner in aerosol form containing triethanolamine as an amine component, diethyl carbitol as a solvent component and Neodol 25-3A and Tergitol TP-9 as nonionic surfactant components. The composition will contain air as a gas when in the foam form.

2.7 D7 discloses (cf. Example 1) a carwash foam concentrate containing triethanolamine and diethanolamine as amine components, propylene glycol as a solvent component and dodecyl benzene sulphonic acid, cocoamide DEA, coco-dimethylamidopropyl betaine, sodium lauryl sulphate and ethoxylated (9 EO) secondary alcohol as anionic, cationic, nonionic and amphoteric surfactants. The composition will contain air as a gas when in the foam form.

2.8 D8 discloses a foaming oven cleaner containing an alkanolamine as an amine component, a solvent and an amine oxide as a nonionic surfactant. The composition will contain air as a gas when in the foam form.

2.9 The subject-matter of claims 42, 43, 48, 51-54, 56, 61, 75, 76 and 78 is therefore not new.

3. Inventive Step (Article 33(3) PCT)

3.1 D10 discloses (cf. claim 1; Table I) a composition from which the subject-matter of claim 24 of the present application differs in that it describes a foam composition

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containing a surfactant.

The problem to be solved by claims 24-41 of the present application can be regarded as the need to provide alternative post-etch cleaning compositions.

However, this solution to the aforementioned problem can not be regarded as being new since D9 discloses (cf. claim 1; page 9, line 26 to page 10, line 9) the use of surfactant-containing foams for removing post-etch residues from semiconductors. Obviously air will be present in the compositions according to D9 when they are in the foam form.

It would therefore be obvious to a person skilled in the art to combine the disclosure of D10 with the disclosure of D9, particularly since D9 teaches that the use of foam gives a more uniform surface treatment (cf. page 2, lines 24-26).

The subject-matter of claim 24 is therefore not inventive.

3.2 In claims 25-41 slight changes in the composition of claim 24 are defined which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen.

Consequently, the subject-matter of claims 25-41 also lacks an inventive step.

3.3 In claims 44-47, 49, 50, 55, 57-60 and 68-74 slight changes in the composition of claim 42 are defined which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claims 44-47, 49, 50, 55, 57-60 and 68-74 also lacks an inventive step.

3.4 In claim 77 a slight change in the composition of claim 75 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claim 77 also lacks an inventive step.

3.5 The subject-matter of claims 24-41, 44-47, 49, 50, 55, 57-60, 68-74 and 77 is therefore not inventive.